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NORTH CENTRAL FOREST EXPERIMENT STATION, FOREST SERVICE—U.S. DEPARTMENT OF AGRICULTURE

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The Changing Recreational Use of the Boundary Waters Canoe Area

ABSTRACT. — Although data on use for 1961 and 1966 are not always comparable, a bare-minimum estimate of the increase in number of visitors between those years is 19 percent. The greatest increase was in number of canoeists and boaters, which rose on the average 9 or 10 percent a year.

An opportunity has arisen for examining use trends in a major recreation area—the Boundary Waters Canoe Area (BWCA). For most other areas, only attendance totals are available, and changes in types and patterns of use are hidden. Now information from BWCA visitor permits, which were first issued by the Superior National Forest in 1966, can be compared to the use patterns shown by the North Central Forest Experiment Station's BWCA study in 1961.

The data hint at a number of interesting shifts in use, most of them indicating increased importance of the Canoe Area as a wilderness resource. Comparisons must be made with caution, however. Use definitions for the 2 years were not always identical, and the data for both years are subject to error. In 1966, the registration system was new, and some visitors, unaware of the requirement, failed to register. Spot checks by the Superior National Forest indicated 72 percent compliance, and the permit figures have been expanded on this basis. The expansion is conservative, however; lakes around the edges of the BWCA were not checked as closely, and it is likely that a larger proportion of visitors in these areas did not have permits.

Most of the 1961 figures came from traffic counters and from estimates of the make-up of the traffic based on roadside interviews with about 5 percent of the departing drivers. Thus some sampling error was to be expected. However, numerous cross-checks showed good accuracy, generally within plus or minus 5 percent.

Amount and Types of Use

The totals for visitors (a person is counted as a "visitor" each time he takes a trip to the canoe country, rather than every time he crosses the BWCA boundary during a visit to the general area) are 72,400 for 1961 and 86,000 for 1966. This 19-percent increase is a bare-minimum estimate of growth because of the likely underestimate of marginal area users.

The figures for the main types of use are:

Type of visitor	*1961*	*1966*	*Percent change*
Paddling canoeists	22,300	34,400	+54
Motor canoeists	8,400	12,100	+44
Boat campers	7,800	12,200	+56
Visitors not staying overnight in BWCA[1]	33,900	27,300	—19
Total	72,400	86,000	+19

[1] Auto campers, resort guests, private-cabin users, local people, etc.; data are combined because of differences in definitions for the two surveys.

The picture, if we take these numbers at face value, is of a great increase in the use of the wilderness core area and its isolated,

primitive campsites by canoeists and boaters. Nearly 59,000 of them camped overnight in the BWCA in 1966, half again as many as in 1961. They constituted half the BWCA visitors in 1961, two-thirds in 1966. In both years, our data for these types of visitors are more reliable than for other types, and we can be reasonably sure that the numbers of canoeists and boaters combined have grown at an average rate of 9 or 10 percent a year. This continues the long record of rapid growth of wilderness use.

On the other hand, there seems to be a decline in use by the types of visitors who stay on the edges of the BWCA and go in and out daily for the more general sorts of recreation that are not unique to wilderness. The data indicate that 6,600 fewer people used the BWCA in this way, a drop of one-fifth from 1961. It seems likely, however, that more marginal users failed to register in 1966 than did canoeists and boaters. If we assume that their numbers actually did not change from 1961 to 1966, a 28-percent increase in total visitors is indicated. This is still a very conservative estimate, and, in my opinion, 40 percent is a more likely figure.

In 1961, visitors travelling by canoe barely outnumbered those using boats. This is apparently no longer true. In 1966, over two-thirds of the visitors using water craft canoed, and paddlers alone made up half of the total. On a visitor-day basis, boaters (excluding canoeists) accounted for about one-fifth of the use.

Geographic Distribution of Use

Most visitor types are still crowded into a few popular places — and in even greater numbers than in 1961. Some spreading out has taken place, however, by the paddling canoe-trippers, over half of whom used one access point — Moose Lake — in 1961. These are the people who value solitude most highly, according to past studies, and maybe this is part of the reason for the spread. Although the number of groups of paddling canoeists starting from Moose Lake in 1966 was 2,000 more than in 1961, they constituted a considerably smaller proportion of the total paddling canoeists:

	Percent of total groups	
Starting point	*1961*	*1966*
Most used point (Moose Lake)	52	39
2nd most used (Fall Lake)	8	17
3rd most used [1]	5	10
Total	65	66

[1] Saganaga in 1961; Lake One in 1966

The top five spots still received about 75 percent of all use in each year, however. In fact, only 12 accesses had at least 1 percent of the paddling groups in 1966 compared to 15 in 1961 (65 access points received some use in 1966).

The two other BWCA overnight-user types are crowded into fewer places. Motor canoeists have become more concentrated and now are the most unevenly distributed type of visitor. The top location (also Moose Lake) had 44 percent of all groups in 1961 and 48 percent in 1966. Boat campers used access points more evenly than motor canoeists, but their concentration has also increased: The share of use accounted for by the top five access points rose from 56 to 76 percent.

The fringe area users all became more bunched up. Auto camper use of the BWCA appears slightly more concentrated in 1966 than in 1961. Resort guests used BWCA access points fairly evenly, but also were more concentrated than in 1961. Private cabin use of the BWCA became slightly more uneven (this distribution would be expected to change slowly because of the fixed location of cabins). Fall Lake led in other day-use (mostly use by local residents) both years and increased its share to one-third of all day-use in 1966. Elsewhere, there was some spreading out.

The proportion of visitors going to Canada apparently fell substantially, but just how

much is in doubt. Seasonal permit holders were not asked if they had visited Canada, so only individual trip permits could be used for this comparison. Attendance at Quetico Park, across the Canadian border, has been nearly constant since 1961. Altogether, the data strongly indicate that the BWCA has become more a major destination and less a travel route through to the Canadian wilderness. The relative shift away from Moose Lake, the main route to Canada, also is consistent with this view.

Visitors' Places of Residence

The comparison of where BWCA visitors came from must also be made only on the basis of the individual trip permits. These included over half of all visitors during the 1966 study period.

With these data restrictions in mind, it appears that proportionately more BWCA visitors of almost every type came from outside Minnesota in 1966 than in 1961. Just over half of all visitors in 1966 were Minnesotans compared to 61 percent in 1961. Paddling canoeists were the only type that remained unchanged.

Local northeastern Minnesota people made up a slightly smaller proportion of total visitors in 1966 — that is, most of the growth in use has come from outside the local area, as would be expected from population trends. More visitors from Minneapolis and St. Paul were paddling canoeists in 1966 than in 1961, and fewer were resort guests. The Twin Cities' share of other types stayed about the same. Chicago contributed nearly as many visitors as northeastern Minnesota. Michigan, Ohio, and Indiana increased their share of most types of use, and the total of visitors from other distant regions — Missouri, Kansas, Nebraska, the Northeast, the South, and the West — also increased.

Party Size

Groups averaged a little larger in 1966 for all visitor types except paddling canoeists, who averaged 5.0 persons per group both years. The overall group average rose from 3.9 to 4.3 persons, about a 10-percent increase.

Length of Stay

Average group length of stay declined from 4.4 days to 3.6. This was partly due to the increase in the number of day-users. Average length of stay for every other type of use declined:

	Number of days		
Type	*1961*	*1966*	*Change*
Paddling canoeists	5.1	4.8	—.3
Motor canoeists	4.2	3.9	—.3
Boat campers	3.9	3.6	—.3
Auto campers	4.3	3.8	—.5
Resort guests	5.1	4.5	—.6
Private cabin users	5.7	5.5	—.2
Day-users	1.0	1.0	—
Total	4.4	3.6	—.8

Conclusions

These changes, taken together, suggest the growing importance of the BWCA as a wilderness resource of national significance. This conforms to past trends and recent projections. BWCA use is already ahead of projections made only 7 or 8 years ago. More people are coming, especially for the unique recreational opportunities provided by the area. They are more often coming to visit the BWCA itself rather than just hurrying through it to Canada. And they are coming from farther away. The canoe-trippers are also using the area somewhat more fully, apparently seeking out some of the less crowded lakes. The slightly shorter length of stay is the only shift that seems to go against this trend toward enhanced value of the wilderness aspects of the area. This may be part of a general trend to more frequent but shorter visits to National Parks, National Forests, and State Parks all around the nation, perhaps related mainly to the increasing mobility of Americans. Conceivably, dissatisfac-

tion by some visitors with increasing crowding, or maybe with the fishing (which some people think is declining) might lead to shorter stays. Part of the apparent drop in some types of general "non-wilderness" recreation would more likely be connected with lack of fishing success than crowding.

Some of the increased prominence of the area's role as wilderness may result from policy changes. Resorts and cabins were purchased and removed from the BWCA, some of the canoe routes were zoned for unmechanized use only, and boat storage on interior lakes was prohibited. The policy changes cannot reasonably account for the magnitude of the shifts in use, however. Only about 2 percent of the 1961 outboard motor use would have violated the zoning regulations in force in 1966. It may be fairer to say that the policy shifts reflect changes in the use of the Canoe Country and in the way it is valued by citizens and public officials.

The trends seem strong enough and consistent enough to be indicative, despite the shortcomings of some of the data. As the visitor registration system becomes more widely known and more complete and accurate, the trends will become clearer, and more definite conclusions can be drawn. But even this blurred view shows an interesting picture of a fascinating and more and more significant region.

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